

ASYMPTOMATIC NEUROSYPHILIS IN HONG KONG *

BY

G. M. THOMSON

Social Hygiene Department, Hong Kong

This report presents the results of 1,821 examinations of the cerebrospinal fluid of patients, diagnosed as suffering from latent syphilis, who attended three social hygiene clinics in Hong Kong during the period January 1, 1953, to August 31, 1954.

During the last quarter of 1952 and the first half of 1953, a moderately intensive educational campaign against the social diseases was carried out, and a large number of the 1,570 male cases attended the male clinics for a routine blood test in response to lectures, newspaper articles, and film shows.

This report only includes patients who stated that they had received no treatment for syphilis, or inadequate treatment, the latter being defined as herbal treatment, less than six intravenous, or penicillin (less than three injections). It must be realized, however, that the clinic patient has a poor comprehension of medical practice and is often unwilling to admit to previous treatment lest this should detract from the consideration given to his present condition.

No patient who showed clinical signs of syphilis of the nervous system in any form has been included in this series.

The patients comprise 1,570 males and 251 females. The male cases are divided into two groups, early latent and late latent syphilis, the dividing line being drawn at a period 4 years after the date of the genital sore.

The female group comprises only cases falling within the category of late latent syphilis. The small number of cases of early latent syphilis in the female in which examination of the cerebrospinal fluid (CSF) was done during this period is insufficient to be of comparative value.

The lumbar punctures were all performed on out-patients in the social hygiene clinics, generally at the second or third visit, but in a small number of cases the test was done towards the end of a 22-day course of penicillin.

It is routine practice for the patient to have a simultaneous injection of 2 ml. procaine penicillin with 2 per cent. aluminium monostearate, and to

be given verbal instructions about measures to lessen the severity of any post-puncture headache.

Method

The specimen of CSF was collected in two containers, one of which was examined for protein content at the Government Chemist's department and the other for cell content and serological reaction at the Pathological Institute.

For the first 8 months of the period, the serological test (STS) performed on the cerebrospinal fluid was the standard Kahn test, and for the latter 12 months the VDRL test was used.

As far as can be judged there has been no appreciable difference in the results given by the Kahn and VDRL tests on the cerebrospinal fluid, and as the interest of this study lies in the overall picture, no distinction has been made between the result of the two serological tests in this report.

It was not possible to arrange for one technician to perform all the serological tests over the 20-month period, but the performance of the test and results were subjected to scrutiny over that period by the Government Pathologist.

The fluid was transported to the Pathological Institute from the clinics by special messenger, but due allowance must be made for the fact that 30 minutes to one hour was usually required to transport the specimens. The results are shown in Tables I and II (opposite).

Discussion

It was considered important to form an assessment of the extent of asymptomatic neurosyphilis in Hong Kong because general paralysis and syphilitic optic atrophy in the past were thought to have contributed an undue proportion of hospital and clinic admissions.

Cook (1948) determined the incidence of both symptomatic and asymptomatic neurosyphilis in Trinidad, and recorded an incidence of 11.5 per cent. of asymptomatic neurosyphilis in 417 cases, but in determining this figure he excluded cases which showed only an increased cell count in the cerebrospinal fluid.

* Received for publication February 17, 1955.

TABLE I
TOTAL CEREBROSPINAL FLUIDS EXAMINED (MALE AND FEMALE) 1,821

Type of Syphilis	Sex	Number of Fluids	Number of Cases showing Abnormality													
			Normal		Increased Cell Count		Increased Cells and Protein, or Increased Protein Alone		Cells and Protein Increased and Positive STS		Protein or Cells Increased and Positive STS		Positive STS only			
			No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
Early Latent	Males	557	500	89.8	13	2.3	14	2.5	2	0.3	4	0.7	24	4.3		
Late Latent	Males	1,013	868	85.7	23	2.3	20	2	24	2.3	23	2.3	55	5.4		
Late Latent	Females	251	236	94	2	0.8	2	0.8	4	1.6	2	0.8	5	2		

TABLE II
RESULTS OF CEREBROSPINAL FLUID EXAMINATION IN 1,570 MALE CASES OF LATENT SYPHILIS

Type of Syphilis	Number of Fluids	Number of Cases showing Abnormality					
		Normal		Cells and/or Protein Increased		Positive STS alone, and Positive STS with Increase of either Cells or Protein or both	
		No.	Per cent.	No.	Per cent.	No.	Per cent.
Early plus Late Latent in Males ..	1,570	1,368	87.13	70	4.45	132	8.4

Granting acceptance of the curative effects of penicillin in the treatment of asymptomatic neurosyphilis, the belief is expressed that, by the detection of an average of six male cases per month of asymptomatic neurosyphilis with marked changes in the cerebrospinal fluid, there should be an appreciable reduction in the incidence of general paralysis and syphilitic optic atrophy in the future.

Summary

The selection of the cases, the tests used, and the results of an examination of the cerebrospinal fluid in 1,821 cases of latent syphilis are briefly described.

The incidence of asymptomatic neurosyphilis was 12.8 per cent. in the 1,570 males, 6.0 per cent. in the 251 females, and 11.91 per cent. for the whole group of 1,821 patients.

I am indebted to Dr. K. C. Yeo, Director of Medical and Health Services, Hong Kong, for permission to publish.

I wish to thank Dr. C. E. Duck, Government Pathologist, for his cooperation, and the clinic medical officers, Drs. S. C. Chi, S. S. Chang, and E. Andrade, for their assistance throughout the investigation.

REFERENCE

Cook, M. J. (1948). *J. vener. Dis. Inform.*, 29, 204.